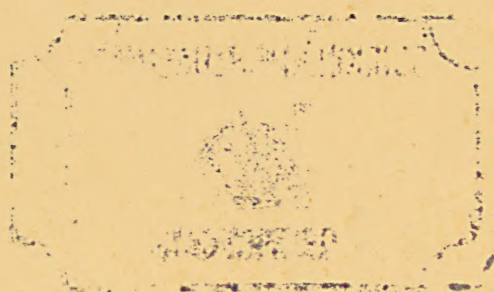


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SCIENCE MUSEUM



OF VICTORIA

MUSEUM OF VICTORIA



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TIMBERS OF VICTORIA.

A

DESCRIPTIVE CATALOGUE

OF THE

SPECIMENS IN THE

Industrial and Technological Museum

(MELBOURNE),

ILLUSTRATING THE

ECONOMIC WOODS OF VICTORIA.

Melbourne:

MASON, FIRTH & M'CUTCHEON, GENERAL PRINTERS,

51 & 53 FLINDERS LANE WEST.

4
1877.

SCIENCE MUSEUM



OF VICTORIA

N O T E.

The better known local names of the principal kinds of timber trees are added, but as the same appellations are so frequently given to different trees, it becomes evident that this kind of nomenclature alone is totally unreliable. The conflicting statements as to the value of some of the timbers are explained by the difference caused by the climate and character of the soil of the locality from which the specimens were taken, as well as the time of year when the tree was felled. Many more determinations of the yield of charcoal, potash, pyroligneous acid &c. and of the weight of a cubic foot of each variety of wood must be made, before an average can be taken.

No attempt has been made to give English names, by merely anglicising phytological ones. This is left to the phytologist, and Baron von Mueller has stated, that he has in contemplation the construction of vernacular names for all our trees; these shall be English appellations, and bearing a logical meaning free from ambiguity, so far as such can be given by translation.

The following is a list of the more generally used vernacular or common names, in which the repetition of the same numbers has reference to the recurrence of different vernacular names under the same species. A plurality of numbers against a common name denotes the recurrence of the same vernacular name as applied to different species.*

	No.
Acacia—see Wattle	116
Beech, Native or Evergreen	15
Blackwood	82
Bloodwood	43
Bottle-tree	44
Box, Prickly... ..	45
Caper tree, Native	169
Currijong	43
„ Bottle-tree	43

* For example, Blackwood or Lightwood both appear under No. 15, which represents *Acacia melanoxylon*. Blue Gum is a name applied to at least four species of Eucalyptus, under Nos. 79, 86, 87 and 107.

	No.
Cypress or Sandarac Pine, Mountain	49
" Desert	51
Dogwood, Native	181
Fig, Native	117
Flintwood	100
Grass-tree	187
Gum or Eucalypt—	
Almond-leaved	77
Apple-tree	106
Blackbutt	100
Blue	79, 86, 87, 107
Bloodwood	82
Box	77, 96, 105, 109
Bastard	92, 94, 107
Grey	76, 102
Red	102
Yellow	92, 96
White	76
Cider	89
Drooping	109
Flintwood	100
Flooded	87, 107
Green	105
Grey	107
Ironbark	93, 95
White	84
Smooth	92
Red	92
Red Flowering	93
Black	93
Mallee	80, 83, 99, 108
Manna	109
Messmate	77, 85
Mountain Ash	91, 110
Peppermint	77, 94, 96, 98, 101
Poplar-leaved	102
Red	104, 107
Spotted... ..	87
Stringybark	77, 95, 97, 101
White	81, 87, 103, 105, 106
Mountain	81, 89
River	103
Woollybutt	94
Heartwood	157
Hickory, Native	11, 29
Honeysuckle-tree, Common	39
" Coast	40
" Heath	41
Lightwood	15
Mangrove, Native	38
Mint-tree	176
Mulberry, Native	130
Musk-tree	35
Myall... ..	8
Myrtle-tree	111, 116
Olive, Spurious	157
Palm, Fan	142
Panax, Palm... ..	159

	No.
Peach, Native	179
Pepper-tree	69
Pine, Oyster Bay	49
„ Sandarac	51
Pittosporum, Fragrant	168
Pomegranate, Wild... ..	45
Quandong	179
Radish-tree	61
Sandalwood, Native	180
Sassafras, Victorian	37
She-oak, Desert	56
„ Drooping	57
„ Shrubby	55
„ Straight	58
Spearwood	7
Spurious Apple	34
Stonewood	48
Sugar-tree	154
Tea-tree, Coast	138
„ Swamp	147
Tree Fern	67
„ Common Mountain	33
„ Common Gully	67
Waratah, Victorian	183
Water-tree	128
Wattle, Black	4
„ Common	4
„ Feathery	4
„ Golden	20
„ Green	4
„ Silver	5
Whitewood	165

The specific names adopted, and authorities will, with few exceptions, be found enumerated in the *Flora Australiensis*, from which work also the few synonyms used have for the most part been selected.

For convenience of reference the species have been arranged in alphabetical order.

In the genus *Eucalyptus*, the position of each species in the Cortical System of Baron von Mueller is in most cases indicated. The following is the arrangement of the groups in that system:—

- (1). *LEIOPHLOÆ*. Bark smooth, outer layers shedding entirely.
- (2). *HEMPHLOÆ*. Bark in the lower part of the trunk persistent, wrinkled and full of clefts, in the upper part and in the branches smooth, by the shedding of the outer layer.
- (3). *RHYTIPHLOÆ*. Bark everywhere persistent, wrinkled, and solid within.

- (4). *PACHYPHLOIE*. Bark everywhere persistent, wrinkled, and fibrous within.
- (5). *SCHIZOPHLOIE*. Bark everywhere persistent, deeply furrowed, and solid within.

This Catalogue has been carefully compiled by Mr. Thos. McMillan, and kindly revised by Baron von Mueller. As supplemental catalogues will be issued from time to time, it is hoped that any person in possession of information relating to the Trees of Victoria will forward the same to the Museum, with, if possible, the specimens of the timber.

Those engaged in collecting woods are recommended to secure with their other specimens (branchlets with leaves, buds, flowers and fruits), portions exhibiting the common prevailing characters of the bark of the trunk and branches. Indeed such materials are absolutely essential for the examination of any member of the genus *Eucalyptus* and reference to the foregoing groups.

J. COSMO NEWBERY,

Superintendent.



ABBREVIATIONS OF NAMES OF AUTHORITIES.

Compendious synonyms and references to authorities will be found in
Bentham and Mueller's "*Flora Australiensis*."

<i>A. Cunn.</i>	ALLAN CUNNINGHAM.—A collector for the Kew Gardens, London, and geographic explorer.
<i>Ait.</i>	AITON.—A former director of the Royal Gardens, Kew.
<i>Andr.</i>	ANDREWS.—An eminent botanical artist, London.
<i>Behr.</i>	BEHR, now a physician in California.
<i>Benth.</i>	BENTHAM.—An eminent English botanist and principal author of the " <i>Flora Australiensis</i> ."
<i>Bonpl.</i>	BONPLAND.—A French botanist and traveller in South and Central America.
<i>Cav.</i>	CAVANILLES.—Director of Botanical Garden at Madrid.
<i>D. C.</i>	DECANDOLLE, father, son and grandson.—Eminent botanists at Geneva.
<i>Decaisne.</i>	Present Director of the Jardin des Plantes, Paris.
<i>Desf.</i>	DESFONTAINES.—Former Director of the Jardin des Plantes, Paris.
<i>Endl.</i>	ENDLICHER.—Director of the Botanical Gardens, Vienne.
<i>F. M.</i>	BARON VON MUELLER.—Government botanist of Victoria and geographic explorer.
<i>Forst.</i>	FORSTER, father and son.—Naturalists, Cook's second voyage.
<i>Gaert.</i>	GAERTNER.—A celebrated Wuerttembergian carpologist.
<i>Gay.</i>	A French botanist; explorer of the Pyrenees.
<i>G. D.</i>	GEO. DON.—Traveller for the London Horticultural Society.
<i>Grah.</i>	GRAHAM.—Formerly Regius Professor of botany at Edinburgh.
<i>Gray.</i>	GRAY, ASA.—Professor at the Harvard University, U.S.
<i>Harvey.</i>	Lately professor of botany and distinguished algologist in Dublin, and Australian tourist.
<i>Henslow.</i>	A professor of botany at Cambridge.
<i>Hook. and Hook. Fil.</i>	HOOKER, father and son.—Directors of the Royal Gardens of Kew.
<i>Lab.</i>	
	LABILLARDIERE.—Naturalist to D'Entrecasteaux's expedition.
<i>Lindl.</i>	LINDLEY.—A distinguished professor of botany in University College, London.

<i>Link.</i>	LINK.—Director of the Botanical Gardens, Berlin.
<i>L' Hert.</i>	L' HERITIER.—A botanist in Paris.
<i>Linn. and</i> <i>Linn. Fil.</i>	LINNÆUS.—The great Swedish botanist and his son.
<i>Mart.</i>	
<i>Miq.</i>	MIQUEL.—Director of the Botanical Gardens, Amsterdam.
<i>Otto.</i>	OTTO.—Inspector of the Royal Gardens, Berlin.
<i>Parl.</i>	PARLATORE.—Director of the Botanical Gardens, Florence.
<i>Poir.</i>	POIRET.—Traveller in North Africa.
<i>Reichenb.</i>	REICHENBACH.—Director of the Botanic Gardens, Dresden.
<i>Reinv.</i>	REINWARDT.—Director of the Botanical Garden, Leyden.
<i>R. Br.</i>	ROBT. BROWN.—An eminent English botanist, and naturalist to Flinders's expedition.
<i>Salisb.</i>	SALISBURY.—An English botanic author.
<i>Schauer.</i>	SCHAUER.—Director of the Botanical Garden of Greifswalde.
<i>Schlecht.</i>	SCHLECHTENDAL.—Director of the Botanical Garden, Halle.
<i>Schott</i>	Director of the Botanical Garden of Vienne.
<i>Sieb.</i>	SIEBER.—A botanical traveller in Australia and elsewhere.
<i>Sims.</i>	Editor of the "Botanical Magazine."
<i>Sm.</i>	SMITH, SIR J. E.—Founder of the Linnæan Society, and eminent botanical writer.
<i>Sweet.</i>	A garden botanist, London.
<i>Tul.</i>	TULASNE.—A French writer on Fungi &c.
<i>Turcz.</i>	TURCZANINO.—A Russian botanical traveller.
<i>Vent.</i>	VENTENAT.—Director of the Botanical Garden, Malmaison.
<i>Willd.</i>	WILLDENOW.—Director of the Botanical Gardens, Berlin.

THE TIMBERS OF VICTORIA,

BEING

*A Catalogue of Specimens of Woods, from the
Trees and Shrubs of Victoria, adapted for
economic purposes.*

ACACIA.

(Natural Order—Leguminosæ. Sub. Order—Mimoseæ.)

THE Acacia in Australia is more numerous in species than any other genus of Phanerogamous (or flowering) plants. It includes the so-called Wattle-trees, a name which has been more commonly applied to those species so celebrated for the astringency of their bark, used for tanning, and for their gum (gum-acacia) identical with gum-arabic.

The most remarkable woods yielded by this genus are the beautiful and valuable Blackwood (specifically identical with Lightwood) (No. 15), the Victorian violet-scented Myall (No. 8), two species of Native Hickory, so called (Nos. 11, 29), and a few other timbers (notably Nos. 7, 9, 10, 13, 14, 24, 27, 31) adapted for cabinet-work, implement handles and small turnery purposes, present and prospective. Time may develop peculiar values possessed by many of our small species. Species hitherto classified as useless on account of their diminutive size, are now already applied in our manufactures.

1. *Acacia brachybotrya*, *Benth.*

Not uncommon in the Mallee country. A tall handsome shrub. (F. M. and others, in *Fl. Aust.*)

2. *Acacia calamifolia*, *Sweet.*

Not unfrequent in the Mallee country. A tall shrub. (F. M. and others, in *Fl. Aust.*)

3. *Acacia Dallachiana*, *F. M.*

In the Buffalo Ranges. A tree of 20 to 30 feet high.

4. *Acacia decurrens*, *Willd.*

COMMON WATTLE.

This, including its variety *A. mollissima*, is known also under the names of Green Wattle, Black Wattle and Feathery Wattle, but must not be confounded practically with the Silver Wattle noted next in order, though but doubtfully a distinct species.

Frequent throughout the colony, except the desert tract; particularly along river-banks, in valleys, ascending to sub-alpine elevations, forming often underwood in Eucalyptus forests. A small or middle-sized tree; in the fern-tree gullies forming a tree 150 feet.

Wood light and tough, extensively used by coopers for staves. Specific gravity, 0.727 and 0.773; weight, 45-48 lbs. per cubic foot of dry wood; it yielded of charcoal 26.125 per cent.; of crude wood vinegar, 44.750 per cent. and of tar 7.125 per cent. Wattle bark is obtainable in vast abundance, and is much used by the tanner. The trees are stripped in September and the two or three months following, and the bark, being allowed to dry, is then in a marketable condition. Wattle gum is copiously available during the summer season. This tree, which grows on the uplands, affords a larger percentage of tannin than the Silver Wattle, whose habitat is on the banks of creeks and rivers. (Baron F. von Mueller, Osborne, Hoffmann.)

5. *Acacia dealbata*, *Link.*

SILVER-WATTLE.

Common on river banks and in valleys, flowering usually earlier than *A. decurrens* var. *mollissima*.

The timber and other products of the tree are very similar to those of the last-named species, though the percentage of tannin is considerably lower.

6. *Acacia discolor*, Willd.

Occurs on heath grounds on the lowlands, as well as on the mountains of Gippsland.

7. *Acacia doratoxylon*, A. Cunn.

SPEARWOOD.

A small tree, restricted to the north-east part of the colony. Its hard and durable wood may be employed for cabinet-work, and is used by the aborigines for the manufacture of their spears and other weapons.

8. *Acacia homalophylla*, A. Cunn.

MYALL.

Is found in the Mallee-scrub. A small tree, being one of the species yielding the violet-scented Myallwood. It possesses a dark and beautiful duramen. From its generally small size the use of its timber is mostly confined to the manufacture of tobacco pipes, whip handles and small articles in turnery. This species yields a gum, which is copiously available during the summer season.

9. *Acacia implexa*, Benth.

Scattered over ridges of the lower silurian formation, from Port Phillip to the Pyrenees and Upper Murray, but nowhere common. A middle-sized tree; wood useful for cabinet-work. Specific gravity, 0.711; weight, 44 lb. per cubic foot of dry wood.

10. *Acacia juniperina*, Willd.

In the granite formation of Gippsland, also in the Grampians.

11. *Acacia leprosa*, Sieb.

(*A. reclinata*.) NATIVE HICKORY.

Dandenong-Ranges and elsewhere in moist forest valleys through the southern and eastern parts of the colony. Usually a rather small tree with a slender stem, yielding excellent wood for furniture. (*Jurors' Report*, 1862.)

12. *Acacia linearis*, Sims.

Frequent in moist forest valleys through the southern and eastern parts of the colony. Usually a rather small tree; wood available for minor furniture. (*Jurors' Report*, 1862.)

13. *Acacia longifolia*, Willd.

Chiefly in the eastern and southern parts of the colony. A large shrub, or frequently a small tree, yielding excellent wood for furniture. (*Jurors' Report*, 1862.)

14. *Acacia lunata*, Sieb.

North-eastern part of the colony.

15. *Acacia melanoxylon*, R. Br.

BLACKWOOD. LIGHTWOOD.

Frequent on rich river flats, thence extending abundantly into the valleys. (F. Mueller.) A middle sized to a large tree, yielding magnificent wood for every description of cabinet-work, as it has a beautifully marked and richly coloured grain, which takes a polish freely, and gives an effect not to be surpassed by walnut, to which it has many points of similarity. It is very close grained and heavy, and is useful for all purposes, where strength and flexibility are required. It is largely used by coach-builders in every department of the trade, for cooperage, in the construction of railway carriages and trucks, and in the better class of agricultural implements. It is also used for gun-stocks, and a variety of turnery work. (*Jurors' Report*.) Specific gravity was 0·664 and 0·777; weight of a cubic foot of dried wood 41–48 lbs. The yield of charcoal from the wood 29·250 per cent, crude wood vinegar 40·250 per cent. and of tar 7·062 per cent. (F. M., Osborne, Hoffmann.)

This species yields tanners' bark, which is inferior however to that from *Acacia decurrens*.

16. *Acacia myrtifolia*, Willd.

Widely distributed over the colony in mountain and forest regions, rocky hills, &c. A tall shrub.

17. *Acacia Osswaldi*, F. M.

In the Mallee-scrub, not uncommon, always remaining a small tree. The plant is exquisitely adapted for tall hedges.

18. *Acacia penninervis*, Sieb.

Scattered through the eastern half of the colony, over ridges and ranges, gregarious on some of the sub-alpine declivities and plateaux. A usually small tree. (F. Mueller.) The bark yielded of tannic acid 17·9 per cent, and of gallic acid 3·8 per cent. The bark of this species was chosen by Baron von Mueller to demonstrate the fact, that many of the species of this

great genus are calculated to afford, in their bark, a large supply of material adapted for packing papers. (*Official Exhibition Record*, 1866, page 246.)

19. *Acacia pravissima*, *F. M.*

Upper Gippsland and Buffalo-Ranges. A tall shrub or small tree.

20. *Acacia pycnantha*, *Benth.*

GOLDEN WATTLE.

Frequent throughout the greater part of the colony, in open forest country or scrub. This is one of the species yielding tanners' bark and wattle gum. The specific gravity of the wood has been given by Mr. Osborne as 0.830; weight of a cubic foot of dried wood about $51\frac{1}{2}$ lbs.

21. *Acacia retinodes*, *Schlecht.*

On grassy ridges and open valleys throughout the greater part of the colony. A moderate-sized ever-flowering tree.

22. *Acacia rigens*, *A. Cunn.*

Desert-country along the Murray and Wimmera. A tall shrub or small tree.

23. *Acacia Riceana*, *Henslow.*

South Gippsland. A small tree.

24. *Acacia salicina*, *Lindl.*

Common in the north-west desert. A small or occasionally middle-sized tree. Wood—hard, heavy and durable, and of a fine dark shade; highly adapted for ornamental furniture. Specific gravity 0.763; weight of cubic foot of dried wood about $47\frac{1}{2}$ lbs. (*Jurors' Report*, 1862.)

25. *Acacia sclerophylla*, *Lindl.*

In the Murray-Desert. A glabrous bushy shrub.

26. *Acacia sentis*, *F. M.*

Murray-Desert. A bush or small tree.

27. *Acacia stenophylla*, *A. Cunn.*

Restricted to the banks of the Murray-River and the lower Wimmera and Avoca. A middle-sized tree. Wood very hard.

28. *Acacia stricta*, Willd.

South and eastern tracts of the colony. Wood, on account of its small size, only obtainable for small articles such as turners' work.

29. *Acacia supporosa*, F. M.

NATIVE HICKORY.

Restricted to the east part of Gippsland. This I consider a valuable wood for many purposes. It is exceedingly tough and elastic; would make good gig-shafts, handles for tools, gun-stocks, &c. Tall straight spars, fit for masts, can be obtained, from 50 to 100 feet long, and 18 inches diameter. (L. Morton.) The bark yielded of tannic acid 6·6 per cent. and of gallic acid 1·2 per cent. For the Hickory *Acacia* of the Timber Collections of 1861, see *Acacia leprosa*, Sieb.

30. *Acacia verniciflua*, A. Cunn.

A shrub or small tree, widely distributed over the colony in mountain and forest regions, rocky hills, &c.

31. *Acacia verticillata*, Willd.

Occurring almost everywhere in moist valleys. More of a shrub than a tree. Wood useful for small turnery work.

32. *Acronychia laevis*, Forster.

Nat. Ord.—*Rutaceæ*.

Ranges scantily from Lake King to Cape Howe. A beautiful tree, attaining a height of 60 feet; diameter of stem occasionally 1½ to 2 feet. Timber of superior quality.

33. *Alsophila Australis*, R. Br.

MOUNTAIN TREE FERN. Nat. Ord.—*Filices*.

On slopes of moist ranges, in deep vegetable mould; abundant in most of the southern forest districts. Attaining to 40 feet high and upwards. Fern-tree veneers are occasionally used for the sake of their peculiar markings. (*Jurors' Report*.) Laboratory researches under the directorship of Baron von Mueller, yielded from the stem charcoal 29 per cent., crude wood vinegar 4·4 per cent., tar 6 per cent., tannic acid 2·9 per cent. and gallic acid 0·9 per cent.

34. *Angophora intermedia*, D. C.SPURIOUS APPLE TREE. *Nat. Ord.—Myrtaceæ.*

Restricted to the eastern part of Gippsland. A middle-sized, rarely a large tree. Timber very valuable in quality; when free from gum-veins it is much used for naves of wheels, and cut into boards for various purposes. (Moore.) This wood is but little used except as fuel; for this purpose it is considered very good. The bark contains but little fibre. (Lockhart Morton, in *Official Record of Exhibition*, 1867.)

35. *Aster argophyllus*, Lab.THE MUSK TREE. *Nat. Ord.—Compositæ.*
(*Eurybia argophylla*.)

Confined to moist umbrageous forest gullies, but there abundant. Never exceeds 60 feet in height, and is generally smaller. It has a pleasant fragrance, is of a beautiful mottled colour, and well adapted for turnery, for veneering, fancy articles of furniture, pianofortes, &c. (*Jurors' Report*.) Specific gravity is stated at 0.642; weight of a cubic foot of dried wood about 40 lbs. A brilliant sap green has been prepared from this species by Mr. Bosisto.

36. *Aster stellulatus*, Lab.*Nat. Ord.—Compositæ.*

Widely distributed through the colony; never of large size, often shrubby. This and many other kinds of wood of small size are catalogued for completeness.

37. *Atherospermum moschatum*, Lab.VICTORIAN SASSAFRAS-TREE. *Nat. Ord.—*
Monimiaceæ.

In deep, wet forest ravines. A middle-sized tree, affording a timber which is useful to the cabinetmaker. It has a dark duramen and frequently exhibits a pleasant figure, and has also the quality of taking a beautiful polish. (*Jurors' Report*, 1862.) The bark of this tree, as also an essential oil therefrom, both of which are shown in the Museum, are articles of commerce. 100 lbs. of bark chips yielded 18 ounces 6 drachms of oil. (Bosisto.) It contains an alkaloid which has been named *Atherospermine*, possessing valuable therapeutic properties. (For further details see *Official Exhibition Record*, 1862, page 51, and *Philadelphia Centennial Exhibition Record* of 1875, p. 82—93.)

38. *Avicennia officinalis*, L.NATIVE MANGROVE. *Nat. Ord.* — *Verbenaceæ*.

Extending along the sea-coast in salt-water estuaries. A low, branching tree, yielding a timber valued for stonemasons' mallets (Moore) and some other utensils.

39. *Banksia marginata*, Cav.*(B. Australis, R. Br)*THE COMMON HONEYSUCKLE-TREE. *Nat. Ord.* — *Proteaceæ*.

In less fertile localities all over the colonial territory, ascending to sub-alpine elevations. A small tree. Yielding a light timber of a beautiful grain, which is used for stems and short knees of boats, and generally for cabinet furniture and various ornamental purposes. (*Jurors' Report.*) Specific gravity 0·610, and yielded of charcoal 29·500 per cent., of crude wood vinegar 40·062 per cent. and of tar 6·562 per cent. A ton of dry wood yielded about 14½ lbs. of pearlash, and 6½ lbs. of pure potash. A cubic foot of dried wood weighs about 38 lbs. (F. Mueller, Osborne.)

40. *Banksia integrifolia*, L. *fil.*THE COAST HONEYSUCKLE-TREE. *Nat. Ord.* — *Proteaceæ*.

To be found only on the coast, eastward from Port Phillip. A middle-sized tree. Yielding a timber, possessing qualities and uses similar to those of *Banksia marginata*, but of much larger dimensions. (*Jurors' Report.*) Specific gravity of wood, 0·799; weight of a cubic foot of dry wood about 50 lbs.

41. *Banksia serrata*, L. *Fil.*THE HEATH HONEYSUCKLE-TREE. *Nat. Ord.* — *Proteaceæ*.

On the sandy heaths of Gippsland, rather frequent. A small or occasionally middle-sized tree, having always a remarkably crooked stem; wood possessing qualities similar to those of *B. marginata*. (*Jurors' Report.*) This timber is soft and short in the grain; it is high coloured and singularly marked. (Lockhart Morton.) Specific gravity 0·803. Weight of cubic foot of dried wood about 50 lbs. The bark of this species yielded of tannic acid 10·8 per cent. and of gallic acid 0·7 per cent.

42. *Boronia arborescens*, F. M.

(*Zieria Smithii*, Andr.; *Z. lanceolata*, R. Br.) Nat. Ord.—*Rutaceæ*.

From the Grampians and Cape Otway Ranges eastward, along humid forest valleys, ascending to high mountain regions. A shrub or small-sized tree. Timber used for wood-engraving in New South Wales. (Moore.) One hundred pounds of fresh leaves yielded $6\frac{1}{2}$ ozs. essential oil, strongly resembling in taste and odour that of rue (*Ruta graveolens*), to which order botanically the plant belongs. Baron von Mueller, in *Official Record of the Exhibition of 1861*, mentioned that this plant might be used medicinally as a substitute for the South African *bucco*.

43. *Brachychiton populneum*, R. Br.

THE BOTTLE TREE; one of the Currijongs. (*Sterculia diversifolia*, G. D.) Nat. Ord.—*Sterculiaceæ*.

In the more open valleys of the Hume-River, Mitta-Mitta, the Snowy River, and thence to the eastern limits of Gippsland. Stem often remarkably turgid, wood exceedingly soft, white and mucilaginous; the fibre of the bark can be converted into cordage. Gum *Tragaranth* exudes from the stem.

44. *Bursaria spinosa*, Cav.

PRICKLY BOX-TREE. Nat. Ord.—*Pittosporææ*.

Common in the lowlands as well as in the mountain districts. A tree of small size; stem rarely exceeding a foot in diameter; wood very hard and fine grained, adapted for turnery, carpenters' rules and many other implements. (*Jurors' Report*.)

45. *Busbeckia Mitchelli*, F. M.

NATIVE CAPER-TREE, or WILD POMEGRANATE. (*Capparis Mitchelli*, Lindl.) Nat. Ord.—*Capparideæ*.

Found in the Mallee-scrub. A small tree.

46. *Callistemon brachyandrus*, Lindl.

Nat. Ord.—*Myrtaceæ*.

Murray-Desert. Never a large tree, often shrubby.

47. *Callistemon lanceolatus*, D. C.

Nat. Ord.—*Myrtaceæ*.

East Gippsland.

48. **Callistemon salignus**, *D. C.*STONEWOOD. *Nat. Ord.*—*Myrtaceæ*.

On banks of watercourses. A small tree, yielding a remarkably hard wood, which has been used for wood-engraving. (*Jurors' Report*, 1862.)

49. **Callitris cupressiformis**, *Vent.*THE MOUNTAIN CYPRESS-PINE. (*Frenela rhomboidea*, *Endl.*) *Nat. Ord.*—*Coniferæ*.

On rocky densely timbered ranges—thus on the Grampians and the Genoa Ranges. A middle-sized tree, known also as the Oyster Bay Pine. (F. Mueller.) Wood used, like that of *Callitris verrucosa*, for a great variety of purposes. (*Jurors' Report*.)

50. **Callitris (Frenela) Endlicheri**, *Parl.*(*F. pyramidalis*, *A. Cunn.*)*Nat. Ord.*—*Coniferæ*.

Ovens Ranges.

51. **Callitris verrucosa**, *R. Br.*THE DESERT SANDARAC-PINE, or CYPRESS.
(*Frenela robusta*, *A. Cunn.*) *Nat. Ord.*—*Coniferæ*.

More or less copiously dispersed through the Mallee scrub, in some directions abundant. The timber of this tree, from its peculiar odour, is sometimes called camphor-wood, and is said to be obnoxious to the attacks of insects. The dark beauty of the wood renders it useful for many small articles of cabinet furniture. (*Jurors' Report*.) Valuable for cabinet purposes, and very durable for telegraph posts. (Moore.) Specific gravity, 0.691. Resin from this species and from *C. cupressiformis*, is available in considerable abundance. It exudes naturally from the bark in tears, or small pendulous masses, and also flows from incisions made to encourage exudation. This substance may be described as a resin of excellent quality, almost identical with the best samples of Sandarac from the *Callitris quadrivalvis* of the Mediterranean, so largely used in the manufacture of varnishes. (*Jurors' Report*, 1861, page 57.) Weight of a cubic foot of dried wood about 43 lbs.

52. **Carumbium populifolium**, *Reinw.*(*Omalanthus populifolius*, *Grah.*) *Nat. Ord.*—*Euphorbiacæ*.

Occurring in the eastern extremity of Gippsland. A tall shrub or small tree.

53. *Cassinia aculeata*, *R. Br.*

Nat. Ord.—*Compositæ*.

Frequent in moist wooded tracks of the colony. Oftener a shrub than a small tree.

54. *Cassinia lævis*, *R. Br.*

(*C. rosmarinifolia*, *D.C.*) *Nat. Ord.*—*Compositæ*.

Murray-Desert. Wood light and soft.

55. *Casuarina distyla*, *Vent.*

THE SHRUBBY SHE-OAK. (*C. rigida*, *Miq.*)

Nat. Ord.—*Casuarinæ*.

Widely dispersed through the colony.

56. *Casuarina glauca*. *C. torulosa*, *Miq.*

THE DESERT SHE-OAK. *Nat. Ord.*—*Casuarinæ*.

In the Mallee-scrub. A middle-sized tree. For description of timber see the following more abundantly dispersed species. The timber of the various *Casuarinas* is in some parts of the colony known by the name of Beefwood.

57. *Casuarina quadrivalvis*, *Lab.*

THE DROOPING SHE-OAK. (*C. stricta*, *Ait. not Miq.*) *Nat. Ord.*—*Casuarinæ*.

Frequent in grassy plains and hills and along the sandy coast. A quick growing middle-sized tree, with branchlets usually if not always pendulous. The She-oaks are well adapted on account of the singular beauty of their grain for various purposes in furniture manufacture. They are used in certain applications in boat-building. This wood is also excellent for turnery and for other ornamental work. She-oak is also frequently used as firewood for domestic purposes. It does not flame, but burns down to an incandescent glowing mass which makes a peculiarly pleasant fuel for the house. (*Jurors' Report.*) Timber used for shingles and staves. (Moore.) The specific gravity of this species was 0.935, 0.965 and 1.037. It yielded charcoal 27 per cent., crude wood vinegar 43 per cent. and tar 7 per cent. The stringy foliage, formed by the cylindrical concrescence of the branchlets with the leaves, can be converted into an excellent pulp for packing and even printing paper and

millboard. (F. Mueller, *Official Record*, 1866, page 247.)
Weight of a cubic foot of dried wood, from 58 to 64 lbs.

58. *Casuarina suberosa*, *Ott. and Dietr.*

THE STRAIGHT SHE-OAK. (*C. leptoclada*, *Miq.*)
Nat. Ord.—*Casuarinæ*.

On grassy ridges of the lower as well as higher regions, not rare. A moderate-sized tree. Timber and foliage possessing qualities similar to those of *C. quadrivalvis*. A ton of dry wood yields about $7\frac{1}{4}$ lbs. pearlash, and $4\frac{1}{2}$ lbs. of pure potash. (*F. M.*)

59. *Casuarina torulosa*, *Aiton.*

Nat. Ord.—*Casuarinæ*.

East Gippsland. Timber used principally for shingles and sometimes for cabinet work. (*Moore.*)

60. *Celastrus Australis*, *Harv. and Muell.*

Nat. Ord.—*Celastrinæ*.

Gippsland.

61. *Codonocarpus cotinifolius*, *F. M.*

THE RADISH TREE. *Nat. Ord.*—*Phytolacææ*.

In the Mallee scrub, rather sparingly; attaining a height of 30 feet. The Poplar of the Central Australian explorers.

62. *Commersonia Fraseri*, *Gay.*

Nat. Ord.—*Sterculiææ*.

East Gippsland.

63. *Coprosma hirtella*, *Labill.*

Nat. Ord.—*Rubiææ*.

Frequent in moist forest-regions.

64. *Coprosma microphylla*, *A. Cunn.*

Nat. Ord.—*Rubiææ*.

In forest swamps and on periodically inundated river banks not rare throughout the southern and eastern districts. A small-sized tree or a bush only.

65. *Correa Lawrenciana*, *Hook.*

Nat. Ord.—*Rutacææ*

In subalpine situations, along rivulets and torrents, to 4000 feet elevation. A tall shrub or small tree.

66. *Cyathea medullaris*, Sm.*Nat. Ord.—Filices.*

Cape Otway Ranges and Dandenong. A very tall but rare fern tree.

67. *Dicksonia antartica*, Lab.*GULLY TREE-FERN. Nat. Ord.—Filices.*

Frequent in the lower fern-tree gullies.

68. *Dodonæa viscosa*.*Nat. Ord.—Sapindaceæ.*

In nearly all regions of the colony.

69. *Drimys aromatica*, F. M.*(Tasmannia aromatica, R. Br.)**NATIVE PEPPER-TREE. Nat. Ord.—Magnoliaceæ.*

Humid forest ranges from the Cape Otway Ranges and Gippsland to the Australian Alps, ascending to at least 5000 feet. A bushy shrub or small tree.

70. *Elæocarpus holopetalus*, F. M.*Nat. Ord.—Tiliaceæ.*

Found only in ravines or on rivers in East Gippsland. A noble tree attaining the height of 120 feet. Wood pale, fine-grained, exquisite for cabinet work. (F. Mueller, *Jurors' Report*.)

71. *Elæocarpus cyaneus*, Ait.*Nat. Ord.—Tiliaceæ.*

Forest gullies and wooded ranges, from Wilson's Promontory to the eastern frontiers of Gippsland. A small or middle-sized tree. Wood compared by artisans to ashwood (*Jurors' Report*, 1862), and recommended for wood engraving by Dr. Bennett.

72. *Eremophila alternifolia*, R. Br.*Nat. Ord.—Verbenaceæ.*

Murray-Desert. A bush but rarely attaining tree-dimensions.

73. *Eremophila bignoniflora*, F. M.*Nat. Ord.—Verbenaceæ.*

Murray-Desert. Wood very valuable for its fragrance, density, and beautiful tinge, elegantly marked with green and yellow. (Thozet.)

74. *Eremophila longifolia*, *F. M.**Nat. Ord.*—*Verbenaceæ*.

Peculiar to the northern and north-western desert. A small tree.

75. *Eremophila oppositifolia*, *R. Br.**Nat. Ord.*—*Verbenaceæ*.

Murray-Desert. Magnificently beautiful, but shrubby only.

EUCALYPTUS OR GUM-TREE.

*(Natural Order.—Myrtaceæ.)*76. *Eucalyptus albens*, *Miq.*WHITE BOX OR GREY BOX TREE. (*Sect.*
Rhytiphloia.)

Occurs on open ridges in the Ovens, Broken River and some other spots. A tree attaining 60 to 80 feet, with a dull green persistent bark (*F. Mueller*), separating in smooth laminae or strips. (*C. Stuart in Fl. Aust.*). The wood is not much valued. (*Woolls*.) The vernacular names in use for most of the Eucalypts are as a rule ill chosen. The term GUM-TREE is particularly objectionable, as they yield kino and not gum.

77. *Eucalyptus amygdalina*, *Lab.*

ALMOND LEAVED EUCALYPT. One of the Peppermint trees, one of the Box trees, and in some districts occasionally known as STRINGY-BARK-TREE, and the MESSMATE of other districts of Victoria.*

In forest country of the southern and eastern parts of the colony, always interspersed with other trees. A tree of colossal size in deep ravines, and a middle-sized tree in more open places. This tree may be the tallest on the globe, perhaps only rivalled by the *Wellingtonia gigantea* (*Sequoia Wellingtonia*) of California. It has been measured repeatedly 420 feet, and

*In the Official Report of the woods of New South Wales, *C. Moore Esq.* classifies the Stringybark under *E. amygdalina*, observing that in that country it is one of the best of hard-wood timbers used in house carpentry; while *Woolls* (also an acknowledged authority) brings the true Messmate under this species.

towards the sources of the Yarra, it is said to attain a still greater height. The wood is fissile, well adapted for shingles, rails, for house-building, for the keelson and planking of ships and other purposes. It is a hard close-grained timber. The inner bark is adapted for the preparation of all kinds of coarser paper. This species contains more oil in its foliage than any of its congeners. 1000 lbs. of fresh gathered leaves, with their small branchlets yield 500 ounces of oil by distillation. It is rube-facient, disinfectant, and employed externally in rheumatic affections, and in the manufactures chiefly for perfumery, soaps &c. Kino from this species is largely available. (Mueller, Bosisto.)

78. *Eucalyptus Behriana*, F. M.

(Sect. *Rhytiphloia*.)

Found in the Mallee-scrub. (F. Mueller.) A tall shrub, or small tree.

79. *Eucalyptus botryoides*, Sm.

The BLUE-GUM of New South Wales. (Sect. *Rhytiphloia*.)

East Gippsland, delighting on river banks. A tall, handsome tree, remarkable for its dark green foliage. The stems, which have a rough, furrowed, persistent bark, attain a height of 80 feet without a branch, and a diameter of 8 feet. The timber, usually sound to the centre, is adapted for water work, waggons, knees of boats &c. No decay was observed in posts which were in use fourteen years. (F. M.) The Blue-gum of the coast district of New South Wales. It is considered to be one of the finest timbers for ship building. (Moore.) Usually of crooked growth, having a gnarled appearance, and never attaining a great size. (Woolls.)

80. *Eucalyptus cneorifolia*, D. C.

Form some of the Mallee-scrub on the River Murray.

81. *Eucalyptus coriacea*, A. Cunn.

One of the White-gum trees. MOUNTAIN WHITE-GUM TREE. (Sect. *Leiophloia*.)

Mountain or marshy forests, ascending in the Alps 4000 to 5000 feet, where it forms rather extensive woods. A tree attaining sometimes a considerable height; exterior bark deciduous, the inner smooth and whitish. (F. Mueller.) Wood

not much valued; leaves in dry seasons eaten by cattle and horses. (Woolls.) Kino from this species largely available.

82. *Eucalyptus corymbosa*, Sm.

THE BLOOD-WOOD EUCALYPT. (*Sect. Rhytiphloia*.)

In Victoria this species is confined to the eastern part of Gippsland. A small or middle-sized tree, but sometimes attaining a great height, with a persistent furrowed bark. Less known to artisans than its apparent quality would seem to merit. It exhibits a clear grain of a red colour, and is well adapted for many useful purposes in the mechanical arts. (*Jurors' Report*.) Timber subject to gum-veins, but the sound timber is durable; and principally used for posts and beams. (Moore, in *Official Record*.) The kino from this species is obtainable in rather large quantities. In experiments conducted at the Melbourne Phytochemical Laboratory, the bark yielded tannin (tannic acid) 2.7 per cent., and gallic acid 0.8 per cent., as also paper material.

83. *Eucalyptus dumosa*, A. Cunn.

One of the principal bushes or small trees constituting the Mallee scrub on the Murray River and its tributaries.

84. *Eucalyptus fasciculosa*, F. M.

(*E. paniculata*, Sm. var. *fasciculosa*, in *Fl. Aust.*)
(*Sect. Schizophloia*.)

In the Mallee scrub. In New South Wales, *E. paniculata* of which this, according to Bentham, would appear to be a variety, is a moderate-sized tree, known as one of the white Ironbarks. (Woolls.) Timber strong and very durable. (Sir Wm. Macarthur, Moore.)

85. *Eucalyptus fissilis*, F. M.

MESSMATE.

A large tree, occurring in less fertile mountain districts; in some places abundant. It has many of the properties of Stringybark and White-gum; wood hard, straight-grained, splits readily into posts, rails, palings and shingles for fencing and building purposes. Wheelwrights use it for shafts, plough-beams, the framing of drays &c. (*Jurors' Report*.)

86. *Eucalyptus globulus*, Lab.

THE VICTORIAN AND TASMANIAN BLUE-GUM. (*Sect. Leiophloia*.)

Is confined to forest valleys except near the coast. It extends often in masses from the vicinity of Cape Otway through moist ranges to Western Port, various parts of Gippsland, Mount Buller and the Buffalo Ranges, but scarcely passing into New South Wales. It grows to nearly the same colossal size, in deep declivities, as *E. amygdalina*, *E. Stuartiana* and *E. obliqua*. Bark somewhat fibrous, deciduous, leaving the inner bark on the trunk smooth. A hard light-coloured timber of great strength and tenacity as well as durability, extensively used for beams, joists &c., in buildings, and for railway-sleepers, piers and bridges. It is also well adapted for ship-building. From the great length in which it can always be procured it is especially suitable for outside planking, and its moderate equality of section renders it useful for piles, where the required length would make the use of red gum impracticable. It has been used for masts of vessels, but owing to its great weight, it is not so suitable as some other kinds of timber for the latter purpose. It is also used for cab-shafts. (*Jurors' Report*.) A test of strength has been made between some Blue-gum, English Oak and Indian Teak. The Blue-gum carried 14 lbs. weight more than the Oak, and 17 lbs. 4 ozs. more than the Teak per square inch. (F. Mueller, in *Select Plants for Industrial Culture in Victoria*.) The specific gravity of the timber has been found 0.698 to 0.889. The kino of the tree is largely available. Paper made from the bark answers for packing and perhaps for printing. Samples of wood spirit, acetic acid, tar, charcoal &c., prepared at the Phytochemical Laboratory of the Botanical Gardens under the directorship of Baron von Mueller, are in this museum. The essential oil and other extracts from and preparations of the foliage of *Eucalyptus globulus* are already of world-wide repute, mainly through Jos. Bosisto, Esq., J.P., M.L.A. Much valuable information in reference to these products will be found in the various official records of the Victorian and Intercolonial Exhibitions of 1861, 1866-7, 1872 and 1875. Mr. Bosisto contributes essential oil, Eucalyptol, Eucalyptic acid, liquor Eucalypti globuli, and Mons. Ramel cigarettes. A ton of dry wood yields about $4\frac{1}{2}$ lbs. pearl-ash and $2\frac{3}{4}$ lbs. of pure potash. Weight of a cubic foot of dried wood from $43\frac{1}{2}$ to $45\frac{1}{2}$ lbs.

87. *Eucalyptus goniocalyx*, F. M.

THE SPOTTED-GUM TREE. One of the White-gum trees, and in New South Wales one of the Flooded-gum trees and one of the Blue-gum trees. (*Sect. Leiophloeae*.)

Confined to the more fertile ranges occurring on the Barwon, on the Ovens, at Sealers' Cove and a few other places; also,

from the Buffalo-Ranges to the Mitchell-River in Gippsland ; and in the district of the Upper Yarra. (F. Mueller.) Generally near rivers or creeks, but it frequently occurs as a forest-tree. (Woolls.) A moderate-sized or a gigantic tree, bark usually deciduous, but sometimes persistent. Timber hard, straight-grained, employed for joists, beams, rafters and heavy framing, as also by the cooper for staves. (*Jurors' Report.*) Its wood resembles in many respects that of *E. Globulus*. (F. M.) Several of the wood specimens marked blue-gum, by Sir Wm. Macarthur (New South Wales), belong to this species, and the Flooded-gum from the Clarence and other parts, must be referred to the same: this tree generally indicates a good soil. (Woolls.) Extensively used for building purposes. (Moore.) The bark yields a good packing paper. (F. Mueller, in *Jurors' Report.*) Kino from this species is largely available. 100 lbs. of fresh leaves gave 16 ozs. essential oil. For illuminating purposes this oil is admirably adapted ; it produces a brilliant white flame, superior in intensity and colour to that from the best American kerosene ; its consumption in kerosene-lamps does not cause any smoke or smell, and is free from danger.

88. *Eucalyptus gracilis*, F. M.

(*Sect. Leiophloia.*)

In the Mallee scrub. A tall shrub or small tree, with silver-grey smooth bark.

89. *Eucalyptus Gunnii*, J. Hook.

THE CIDER-GUM TREE, MOUNTAIN WHITE-GUM. (*Sect. Leiophloia.*)

Sub-alpine regions. A small, often scrubby tree, but attaining sometimes 30 feet, with smooth bark. The sap can by fermentation be converted into a beverage.

90. *Eucalyptus incrassata*, Lab.

(*Sect. Leiophloia.*)

In the Mallee-scrub. A shrub or small tree, with a smooth bark, persistent, or shedding in large patches.

91. *Eucalyptus inophloia*, F. M.

One of the MOUNTAIN ASH-TREES. (*Sect. Pachyphloia.*)

In many of our forest-ranges. The Mountain Ash has been so called from a fancied resemblance to the British timber of that name. It is exceedingly flexible, and has been employed

by the coachmakers for shafts for light vehicles, for which it is well adapted. This timber is said to be in great favour in the Beechworth district for almost every purpose. It is also used largely for palings, fencing and other inferior applications. (*Jurors' Reports*, 1862, 1876.)

92. *Eucalyptus largiflorens*, *F. M.*

(*E. bicolor*, *A. Cunn.*)

One of the YELLOW BOX, BASTARD-BOX, SMOOTH or RED IRONBARK. (*Sect. Hemiphloia*.)

In the Mallee scrub, and generally in the N.W. portion of Victoria. A large shrub, or sometimes a tree of 30 to 40 feet, with a persistent ash-grey or blackish bark (F. Mueller, A. Cunningham), or a tall tree with a smooth white bark. (Dallachy.) When young, the upper branches are smooth and the lower part of the tree is half-barked, like the box. As it gets older nearly all the bark falls off. Wood very hard, and good for shafts, poles, cogs, fencing, and is exceedingly durable. (Woolls.) Timber redder, closer, softer, and more easily worked than the generality of Ironbarks; highly valued. (Moore.)

93. *Eucalyptus leucoxylon*, *F. M.*

THE IRONBARK TREE sometimes RED FLOWERING or BLACK IRONBARK TREE. (*E. sideroxylon*, *A. Cunn.*—*Sect. Schizophloia*.)

On many of our less fertile ridges, usually indicating an auriferous country, gregarious. This is considered the strongest wood in our colony. It is much recommended for railway sleepers, and extensively used for underground mining work. It is very extensively employed for the handles of axes and other implements by Victorian manufacturers. A middle or large-sized tree, with a persistent, rough, iron-grey bark. (F. Mueller.) Dark grey and spongy on the trunk, soft and white on the branches (Oldfield, in *Fl. Aust.*) One of the hardest and heaviest of our native woods, and has a peculiarly thick and rugged bark, with deep longitudinal fissures, which is strikingly characteristic. It possesses great strength and tenacity, and has a close and straight grain, on which account it is highly useful to the coachmaker and wheelwright for the poles and shafts of carriages and the spokes of wheels. Its greasy nature also renders this wood very serviceable to the millwright for the cogs of heavy wheels. It is also valuable for many purposes in ship-building, and constitutes one of the most imperishable of our timbers. (*Jurors' Report*.) Specific gravity, 1.106 and 1.024, and yielded—charcoal, 28 per

cent.; crude wood vinegar, 45 per cent. and tar, 6 per cent. Kino is also largely available from this species. The bark, according to the same authority (Baron von Mueller), is capable of being converted into a coarse paper; and 100 lbs. of leaves gave 16 ozs. 7 drachms of essential oil. Weight of a cubic foot of dry wood, from $63\frac{1}{2}$ to $68\frac{1}{2}$ lbs.

94. *Eucalyptus longifolia*, Link and Otto.

(*E. Woollsi.*)

THE WOOLLYBUTT-TREE. In some districts of New South Wales it is also called PEPPER-MINT and BASTARD BOX-TREE. (*Sect. Hemiphloia.*)

Occurs in the E. portion of Gippsland. A tall stately tree. Rough, fibrous, persistent, or partially deciduous bark. (F. Mueller.) Somewhat smooth, or fibrous and wrinkled, according to the size of the tree. (Woolls, in *Fl. Aust.*) Like Ironbark this timber is much used for wheel-spokes. It bears a high character for durability, when used for fencing purposes. For posts, it is said to stand undecayed in the ground for twenty years. The wood is esteemed an excellent fuel. (Lockhart Morton, in *Official Record.*) The wood is not much esteemed except for firewood. It is sometimes split for fencing and rough carpenters' work, although the timber is by no means durable. (Woolls.) Timber subject to gum-veins, and not much in request. (Moore.) A beautiful solid wood, yet easily worked and well adapted for furniture. (*Jurors' Report.*) The Woollybutt, grown at Illawarra, is in very high repute for wheelwrights' work. (Macarthur.) The fibre of the bark is adapted for packing paper. Specific gravity of wood, 1.187. The yield of essential oil from 100 lbs. of leaves, which had suffered in transit, was 3 ozs. $3\frac{1}{4}$ drachms. Weight of a cubic foot of dried wood, about $68\frac{1}{2}$ lbs.

95. *Eucalyptus macrorrhyncha*, F. M.

One of the STRINGYBARKS; also, one of the IRON-BARKS. (*Sect. Pachyphloia.*)

Occurs on the Macalister and Ovens-rivers and some other localities. A tall tree, with dark dull-grey, furrowed and fibrous bark. Allied to the common Stringybark of the colony in quality of timber.

96. *Eucalyptus melliodora*, A. Cunn.

YELLOW BOX, BOX, and sometimes PEPPER-MINT TREE. (*Sect. Hemiphloia.*)

Especially in the S.E. and E. ranges of the colony on low open ridges, particularly of the miocene formation. (F. Mueller.) A moderate-sized tree of irregular growth, with a smooth bark of a pale lead colour. (A. Cunningham.) Scaling off in flakes in the upper part of the tree. (C. Moore.) Furrowed and persistent. (F. Mueller, in *Fl. Aust.*) A valuable timber of a light colour and greasy nature, remarkable for the hardness and closeness of its grain, its great strength and tenacity, and its durability both in the water and when placed in the ground. It is largely used by coachmakers and wheelwrights for the naves of wheels and for heavy framing, and by millwrights for the cogs of their wheels. In ship-building it has numerous and important applications, and forms one of the best materials for treenails, and for working into large screws in this and other mechanical arts. (*Jurors' Report.*) Specific gravity of wood, 1.081 to 1.125. There is a sample of kino from this species in the Museum. Weight of a cubic foot of dried wood, from 67 to 70 lbs.

97. *Eucalyptus obliqua*, L'her.

STRINGYBARK TREE. (*Sect. Pachyphloia.*)

In vast masses, constituting on the more barren ranges in nearly all parts of our territory the prevalent timber. A large, often a gigantic tree, the largest ranging from 300 to 400 feet. (F. Mueller.) Bark very thick, rugged and fibrous. A hard, straight-grained timber; although of an inferior class it is used for a great variety of building purposes, notwithstanding its well-known liability to warp or twist and its susceptibility to dry rot. It splits with facility, forming posts, rails and palings for fencing, also shingles for roofing. (*Jurors' Report.*) Supplies a good deal of second-class sawn timber in the market. (*Jurors' Report.*) Specific gravity of wood, 0.809, to 0.990. The paper prepared from the bark of this tree is not merely suited for packing, but also for printing, and even writing. It may also be employed for mill and paste boards. The pulp bleaches readily. The bark is used for thatching in the Australian bush. Samples of wood spirit, acetic acid, tar and charcoal, prepared at the Phytochemical Laboratory, under the direction of Baron von Mueller, are in the Museum. Weight of a cubic foot of dry wood, from 50 to 60½ lbs.

98. *Eucalyptus odorata*, Behr.

One of the PEPPERMINT TREES. (*Sect. Rhytiphloia.*)

In the coast-limestone formation, towards the South Australian boundary. Not a large tree.

99. **Eucalyptus oleosa**, *F. M.*

(*Sect. Hemiphloia.*)

WATER-ROOTED GUM-TREE; WEIR-MALLEE.

In the Mallee scrub. A shrub or small tree, the bark of the trunk rough and persistent, that of the branches smooth. The essential oil, of which the yield is large, is employed chiefly in the manufacture of varnishes. It is a perfect solvent of India-rubber without heat. Potash from this species is also contributed.

100. **Eucalyptus pilularis**, *Sm.*

The BLACKBUTT or FLINTWOOD.

(*E. persicifolia*, *D. C.*—*Sect. Hemiphloia.*)

Occurs in East Gippsland. A tree of considerable size, with dark-coloured rough or somewhat furrowed persistent bark at the base. (*F. Mueller*, *Moore*, in *Fl. Aust.*) Smooth and falling off in flakes upwards and on the branches. (*Moore.*) This wood, which is of a clear grain and a reddish colour, is less known to our artisans than its apparent quality would seem to merit. (*Jurors' Report.*) Excellent for house-carpentry, ship-building and indeed for any purpose, where strength and durability are required. Specific gravity has been given at 0.897 (*Woolls*) and 0.803 (*Jurors' Report.*) A sample of essential oil will be found in the Museum. Weight of cubic foot of dry wood 50 to 56 lbs.

101. **Eucalyptus piperita**, *Sm.*

One of the PEPPERMINTS, sometimes STRINGY-BARK. (*Sect. Pachyphloia.*)

Occurs in East Gippsland. A tree attaining a considerable height, with a persistent fibrous bark, at least on the trunk. (*Fl. Aust.*) A large tree resembling Stringybark, bark fibrous and persistent, excepting on the upper branches. Wood and bark inferior to those of Stringybark. (*Woolls.*) Timber used for various purposes. (*Moore.*)

102. **Eucalyptus polyanthemos**, *Schauer.*

RED and GREY BOX-TREE and POPLAR-LEAVED GUM-TREE. (*Sect. Rhytiphloia.*)

On the Ovens, Broken River and some other spots on open ridges. A tree sometimes small, sometimes attaining 40 to 50

feet, with an ash-grey, persistent, rough and furrowed bark. (F. Mueller.) Timber used by wheelwrights for naves, felloes and spokes. (Moore.) This tree has a thick rough bark, and the wood, which is of a brown colour towards the centre, is very hard and tough. (Woolls.) One of our best woods for fuel.

103. *Eucalyptus radiata*, Sieb.

(*E. amygdalina*, Lab., var. *radiata*.)

One of the WHITE-GUMS, RIVER WHITE-GUM.
(Sect. *Leiphloia*.)

Abounds in the moister ranges of Dandenong, towards the sources of the Yarra, Ovens River, Latrobe River and on other mountains of Gippsland. (F. Mueller.) A smooth tree, with the bark generally hanging from the upper branches in long strips, and the trunk nearly white; the timber not valued by settlers. (Woolls.) Foliage very rich in essential oil.

104. *Eucalyptus rostrata*, Schlecht.

THE RED GUM-TREE. One of the so-called
Flooded-gums of N.S.W. (Sect. *Leiphloia*.)

Along river-flats and open valleys almost everywhere. (F. Mueller.) A tall tree, bark grayish-white, smooth and separating in thin layers, rarely persistent and rough. A very hard, compact wood, possessing a handsome, curled, but rather short grain; it is of a brown-red colour, and suitable for veneering purposes, for furniture &c. It is largely used for posts for fencing purposes. It is less subject to decay than most of the other timbers. When properly selected and seasoned, it is well adapted for many purposes in ship-building—such as heavy framing beams and knees. It is also used in the construction of culverts, bridges, wharves and by wheelwrights for the felloes of heavy wheels, and is much approved of for railway-sleepers and engine-buffers. (*Jurors' Report*.) It is almost entirely free from the tendency to longitudinal shrinkage, which is the invariable characteristic of the other species of the Eucalypts, and is almost indestructible in damp ground or in water, either fresh or salt. Its defects are its short grain, which makes it untrustworthy for horizontal bearing timber in any but very short lengths; and it cannot easily be procured in long lengths and of a moderately small diameter—a point of some importance in piles, where it is desirable to have the whole section of the tree with its waning intact. Still, within a reasonable limit of length, it makes the best of all piles for engineering works, in consequence of the resistance it offers

to the attacks of the *Teredo navalis*, and it cannot be surpassed for any purposes, either in engineering or building, where a resistance to sheer downward pressure is desired. It makes unequalled planking for bridges or wharves, and none but red gum sleepers are considered first-class. (*Jurors' Report.*) Specific gravity of this wood has been stated at 0.858 and 0.923. Samples of essential oil, wood spirit, acetic acid, tar and charcoal, obtained from this tree, are in the Museum. Paper prepared from the bark of this species proves much coarser than that of *Eucalyptus obliqua*; the pulp may be either used in admixture with that for packing paper and pasteboard, or in the composition, or perhaps as the sole ingredient for blotting and filtering papers. (F. Mueller, in *Jurors' Report.*) The kino from *E. rostrata* is preferred to that from other species as a therapeutic astringent. A ton of dry wood yields approximately 4 lbs. of pearlash and $2\frac{1}{4}$ lbs. of pure potash. Weight of cubic foot of dry wood, from $53\frac{1}{2}$ to $57\frac{1}{2}$ lbs.

105. *Eucalyptus stellulata*, Sieb.

One of the BOX-TREES, WHITE-GUM, LEAD OR GREEN GUM-TREE. (*Sect. Leiophloe.*)

Ascends into the subalpine regions from the Fern-tree gullies: Stoney Hills towards Lake Omeo subalpine ranges near Mount Barkley, ranges on the Macalister River and on the Upper Genoa River. A small tree, the furrowed bark coming off at length in layers (F. Mueller), rugose below, very smooth above, and of a lead colour. Bark subject to much variation in appearance, being sometimes white and sometimes of a lead colour. (Woolls.) Timber excellent, in high repute for ship-building and various other purposes. (Moore.) Of no service except for fuel. (Woolls.)

106. *Eucalyptus Stuartiana*, F. M.

APPLE TREE, WHITE GUM-TREE. (*Sect. Hemiphloe.*)

Occupies many of the moister tracts in the plains, and some of the open ranges ascending the wooded moist mountains of the Australian Alps, extending to the western frontier. A tree sometimes of enormous size. Bark of the branches smooth and deciduous, that of the trunk rough and rigid and somewhat stringy. (F. Mueller.) The timber of this species is both durable and tough. A sample of oil from the leaves of this Eucalypt may be seen in the Museum. The bark of this tree furnishes good material for packing paper and pasteboard, and has yielded, according to the published

researches of Baron von Mueller and Mr. Hoffmann, 4·6 of tannic, and 0·7 per cent. of gallic acids.

107. *Eucalyptus tereticornis*, Sm.

Sometimes called GREY GUM-TREE, BLUE GUM-TREE, FLOODED GUM-TREE, RED GUM-TREE, and BASTARD BOX-TREE. (*Sect. Leiophloia*.)

Occurring on Snowy River, Mitchell River and elsewhere in East Gippsland. A tall tree with smooth whitish or ash-coloured bark, shedding in thin layers. This wood is prized in some districts more than others, but when Ironbark cannot be procured, it is always considered suitable for rails and posts as well as for fuel. (Woolfs.) An excellent timber, much used for plough-beams, poles and shafts for drays and carts, spokes of wheels, as well as in ship-building. (Moore.) This species is very closely allied to *E. rostrata*.

108. *Eucalyptus uncinata*, Turcz.

MALLEE GUM-TREE. (*Sect. Leiophloia*.)

Wimmera and desert of the Murray-River and Avoca. A tall shrub with smooth or ash-grey bark, coming off in coriaceous plates. Yields from the foliage a comparatively large quantity of oil by distillation.

109. *Eucalyptus viminalis*, Lab.

THE MANNA GUM-TREE, DROOPING GUM ; sometimes BOX-TREE. (*Sect. Leiophloia*.)

A middle-sized tree, scattered extensively over rather open grassy ridges and plains, impressing on them often a park-like appearance. (F. Mueller.) Outer bark frequently rough and deciduous. The wood is not much esteemed. (Woolfs.) Specific gravity of timber has been stated as 0·685. 100 lbs. of fresh leaves yielded only 5½ drachms essential oil. A sample of kino from this species will be found in the Museum. A ton of dry wood yields about 3¼ lbs. of crude potash and 1¾ lbs. of pure potash. Weight of cubic foot of dry wood about 43 lbs.

110. *Eucalyptus virgata*, Sieb.

Gippsland. One of the Mountain-ash trees.

111. *Eugenia Smithii*, Poir.

(*Acmena floribunda*, D.C.)

MYRTLE TREE. Nat. Ord.—*Myrtaceæ*.

Not rare from Sealers' Cove to the E. boundary of the colony, along rivers and glens. A splendid tree, with remarkably dark and shady foliage, attaining a height of 120 feet. Specific gravity of wood 0·898 and 0·935. The bark yielded of tannic acid 16·9 per cent., and of gallic acid 3·6 per cent. Weight of dry wood per cubic foot 56 to 58 lbs. (*Jurors' Report*, 1866.)

112. **Eupomatia laurina**, *R. Br.*

Nat. Ord.—*Anonaceæ*.

Occurring only in the most eastern part of Gippsland, where the tree attains the height of 40 feet. (F. Mueller.)

113. **Exocarpus cupressiformis**, *Lab.*

NATIVE CHERRY TREE. *Nat. Ord.*—*Santalaceæ*.

Widely distributed over the more fertile open ridges and through both barren and fertile forest-ranges. A small or middle-sized tree. Wood suitable, from the closeness of its structure, to the purposes of the cabinetmaker and wood-turner. (*Jurors' Report*.) A soft, fine-grained timber, and is the best wood I know for carving. (Lockhart Morton, in *Official Record*.) It is used for tool-handles, spokes, gun-stocks, &c. (W. Archer, in *Tasmanian Report*, 1862.) Specific gravity of wood (Vict. specimen), 0·756 and 0·845. Weight of a cubic foot of dry wood, from 47 to 53 lbs.

114. **Exocarpus spartea**, *R. Br.*

Nat. Ord.—*Santalaceæ*.

In the desert-country on the Murray River. Of weeping habit.

115. **Exocarpus stricta**, *R. Br.*

Nat. Ord.—*Santalaceæ*.

Through the greater part of the colony. Rather of shrubby than arboreous growth.

116. **Fagus Cunninghami**, *Hook.*

THE EVERGREEN BEECH, sometimes called
NATIVE MYRTLE TREE. *Nat. Ord.*—*Cupuliferaæ*.

In the most secluded recesses of the mountains, from Dandenong to Mount Baw-Baw, on the various remote sources of the Latrobe River, at Wilson's Promontory and in the Cape Otway

Ranges. A magnificent tree, attaining a height of 200 feet. On the Mount Baw-Baw Ranges this beech mainly constitutes the forest for many miles. (F. Mueller.) Our beech has a reddish coloured wood, much employed by cabinetmakers for various articles of furniture. Very large planks of it are obtained of a highly beautiful grain and figure, and when polished its ornamental character is sure to attract attention. It is also used for the cogs of wheels by millwrights. Specific gravity, 0·883. Weight of a cubic foot of dry wood, 55 lbs.

117. *Ficus scabra*, *Forst.*

THE NATIVE FIG TREE. *Nat. Ord.*—*Urtiaceæ*.

Here restricted to the most eastern regions of Gippsland.

118. *Geijera salicifolia*, *Schott.*

Nat. Ord.—*Rutaceæ*.

With us confined to the desert on the River Murray, where it is only a small tree or shrub.

119. *Goodenia ovata*, *Sm.*

Nat. Ord.—*Goodenoviaceæ*.

Common through the colony. A shrub only.

120. *Goodia lotifolia*, *Salisb.*

Nat. Ord.—*Leguminosæ*.

In many parts of the colony. A small tree or shrub.

121. *Grevillea alpina*, *Lindl.*

Nat. Ord.—*Proteaceæ*.

Mount William, in the Grampians, Mount Disappointment, Buffalo-Ranges, Upper Yarra and Ovens Ranges. A much branched shrub, erect, spreading or diffused. Never truly alpine.

122. *Grevillea variabilis*, *Lindl.*

Nat. Ord.—*Proteaceæ*.

Grampians, Wimmera and on a few adjacent plains. A shrub of several feet.

123. *Hakea acicularis*, *R. Br.*

Nat. Ord.—*Proteaceæ*.

Wilson's Promontory, Macalister-River and ranges near Steiglitz. A shrubby or seldom somewhat arborescent species.

124. *Hakea eriantha*, *R. Br.*

Nat. Ord.—*Proteaceæ*

East Gippsland. A tree of small size.

125. *Hakea flexilis*, *F. M.*

Nat. Ord.—*Proteaceæ*.

North-west districts of the colony. A tall shrub or small tree of about 20 feet.

126. *Hakea nodosa*, *R. Br.*

Nat. Ord.—*Proteaceæ*.

In the southern portions of the colony. Shrubby only.

127. *Hakea pugioniformis*, *Cav.*

Nat. Ord.—*Proteaceæ*.

In many localities. Shrubby only.

128. *Hakea leucopetra*, *R. Br.*

THE WATER TREE. (*H. stricta*.) *Nat. Ord.*
—*Proteaceæ*.

In the desert regions. Specific gravity of wood 0·818, weight of a cubic foot about 51 lbs.

129. *Hakea ulcina*, *R. Br.*

Nat. Ord.—*Proteaceæ*.

Not uncommon. Only of shrubby size.

130. *Hedycarya Cunninghami*, *Tul.*

(*H. pseudo-morus*.)

NATIVE MULBERRY. *Nat. Ord.*—*Monimiaceæ*.

Following the rivulets of our humid southern ranges. A small or middle-sized tree, with comparatively soft wood of a beautiful shade, quite available for cabinet-work. (*Jurors' Report*, 1862.)

131. *Helichrysum cinereum*, *F. M.*

(*Ozothamnus cinereus*, *D.C.*)

Nat. Ord.—*Compositæ*.

Frequent in most parts of the colony. Shrubby only.

132. *Heterodendron oleifolium*, Desf.*Nat. Ord.*—*Spindaceæ*.

Mallee scrub on the Rivers Murray, Wimmera and Avoca. A tall shrub. Specific gravity of wood 0·858; or weight of a cubic foot 53 lbs.

133. *Howittia trilocularis*, F. M.*Nat. Ord.*—*Malvaceæ*.

On bushy declivities of the Victoria-Ranges, at Mount Arapiles, on shrubby ranges around Lake King, in coast ravines towards Cape Howe, on the banks of the Lower Genoa-River. An erect, flexible shrub, attaining under favourable conditions the height of fully 20 feet.

134. *Hymenanthera Banksii*, F. M.*Nat. Ord.*—*Violarineæ*.

Not rare in the southern and south-eastern parts of the colony, from the marshy lowlands to the highest summits of the Australian Alps. A stout shrub, many feet high, except in alpine localities.

135. *Kunzea corifolia*, Reichenb.*Nat. Ord.*—*Myrtaceæ*.

Maritime rocks, Wilson's Promontory, Genoa River, Glenney Island. A tall shrub.

136 *Kunzea peduncularis*, F. M.*Nat. Ord.*—*Myrtaceæ*. (*K. leptospermoides*.)

Snowy River and Macalister River, mountains near Brighton. A tall shrub or sometimes a small tree.

137. *Leptospermum flavescens*, Sm.*Nat. Ord.*—*Myrtaceæ*.

Buffalo-Ranges, Yarra, Goulbourn and Ovens-Rivers. Usually a tall shrub.

138. *Leptospermum lævigatum*, F. M.

THE COAST TEA-TREE. *Nat. Ord.*—*Myrtaceæ*.
(*Fabricia lævigata*, Gærtn.)

Everywhere on the sandy coast. Never a large tree. Most important for fixing coast-sands.

139. *Leptospermum lanigerum*, Sm.*Nat. Ord.*—*Myrtaceæ*.

Gippsland and mountainous districts generally, in moist localities, particularly along rivers and around swamps.

140. *Leptomeria aphylla*, R. Br.*Nat. Ord.*—*Santalaceæ*.

Grampians, Murray River and Mount Korong.

141. *Leucopogon Richei*, R. Br.*Nat. Ord.*—*Epacrideæ*.

On sand and rocky sea-coasts, common. A tall shrub or small tree.

142. *Livistonia Australis*, Mart.Our FAN-PALM. *Nat. Ord.*—*Palmæ*.

East Gippsland. Attaining a height of 80 feet. Its terminal bud affords the palm-cabbage, whilst the leaves are much sought as material for the manufacture of hats.

143. *Lomatia Fraserii*, R. Br.*Nat. Ord.*—*Proteaceæ*.

In the deep ravines of our southern and eastern ranges, in forest valleys, especially among Fern-trees, not very common, but ascending to high cold elevations along the rivulets. A good-sized tree, the wood tough and durable, serviceable for furniture. Specific gravity of wood 0·678.

144. *Lomatia longifolia*, R. Br.

In irrigated forest valleys, particularly of the uplands. A light wood and very hard, with a beautiful small figure, works well. (Extracts from *Jurors' Report*, London Ex., 1862.)

145. *Melaleuca armillaris*, Sm.*Nat. Ord.*—*Myrtaceæ*.

Known in Victoria only from East Gippsland. A small tree.

146. *Melaleuca decussata*, R. Br.*Nat. Ord.*—*Myrtaceæ*.

Common on river banks on the south-eastern extremity of the colony. A tall glabrous shrub, sometimes a small tree.

147. *Melaleuca ericifolia*, Sm.

THE SWAMP TEA-TREE.

The so-called Tea-tree, though never used for preparing any beverage. It fills most of our brackish as well as freshwater swamps, and lines also innumerable watercourses. It is never a large tree, but on the contrary, generally small, though it may be seen occasionally 50 to 60 feet high. The wood is close-grained. In Tasmania it is used chiefly for turnery. It yielded—charcoal, about 28 per cent., crude wood vinegar 46 per cent., and tar 7 per cent. The friable lamellar bark can be converted into an excellent blotting, perhaps also filtering paper. One hundred pounds of leaves and smaller branches yielded 5 ozs. of an essential oil, resembling that of cajuput from *M. leucodendron*. The material in enormous quantities is obtainable in most parts of the colony. A ton of dry wood yields about 16½ lbs. of crude potash and 4½ lbs. chemically pure potash. (F. Mueller.)

148. *Melaleuca parviflora*, Lindl.

Nat. Ord.—*Myrtaceæ*. (*M. curvifolia*, Schl.; *M. Preissiana*, Schau.)

Observed not only along the coast-tracts, particularly on sand, but also in the sub-saline desert-parts of Victoria. A small or middle-sized tree. Specific gravity of wood 0.993. One hundred pounds of the leaves and branchlets of this species yielded about 6 ozs. of an essential oil, resembling that of cajuput very closely. The material is largely obtainable in the Murray-desert and also on the coast. (*Jurors' Report*, 1861, page 40.) Weight of a cubic foot of dry wood about 62 lbs.

149. *Melaleuca squarrosa*, Sm.

Nat. Ord.—*Myrtaceæ*.

Moist heaths and marshes, not rare. A tree developed in morassy forest glens to the height of 80 feet, the stem attaining a diameter of 2 to 3 feet, usually however shrubby, the bark consisting of innumerable friable papyraceous layers. Specific gravity of wood 0.713. One hundred pounds of leaves and branchlets yielded only 5 drachms of oil. Weight of a cubic foot of dry wood about 44 lbs.

150. *Monotoca elliptica*, R. Br.

Nat. Ord.—*Epacrideæ*.

In heathy coast tracts not rare. Never of large size. Wood useful for tools, particularly for planes and mallets; works well, and is indeed superior to English beech for such purposes. (Extracts from *Jurors' Report*, London Ex., 1862.)

151. **Myoporum Cunninghami**, *Benth.*

Nat. Ord.—*Myoporineæ*.

In the north-west desert. A small tree.

152. **Myoporum deserti**, *A. Cunn.*

(*M. dulce*, *Benth.*)

Nat. Ord.—*Myoporineæ*.

Restricted to the north-western portion of the colony; shrubby merely.

153. **Myoporum insulare**, *R. Br.*

Nat. Ord.—*Myoporineæ*.

In considerable quantity available, in the marshes and sand-tracts of the coast, also in the somewhat saline portions of the desert, over other parts of the colony but sparingly distributed. A middle-sized tree. Yields a beautiful light-coloured wood, which has been used for inlaying. (*Jurors' Report*.) Specific gravity 0.809 and 0.819, or weight of a cubic foot 50 to 51 lbs.

154. **Myoporum platycarpum**, *R. Br.*

THE SUGAR-TREE. *Nat. Ord.*—*Myoporineæ*.
(*Disoon platycarpus*, *F. M.*)

In the Mallee scrub. A small tree, exuding from its bark a saccharine substance. Specific gravity of wood 0.840, or weight of a cubic foot, $52\frac{1}{2}$ lbs.

155. **Myrsine variabilis**, *R. Br.*

Nat. Ord.—*Myrsineæ*.

In the forest glens and on river banks in the southern and eastern parts of the colony. Generally a small, occasionally a middle-sized tree. Specific gravity of wood 0.714, or weight of a cubic foot $44\frac{1}{2}$ lbs.

156. **Nephelium leiocarpum**, *F. M.*

Nat. Ord.—*Sapindaceæ*.

On the south-eastern boundary of the colony. A beautiful tree.

157. *Notelæa ligustrina*, Vent.SPURIOUS OLIVE. *Nat. Ord.—Oleaceæ.*

Found on shady torrents in the southern portion of the colony, but seldom elsewhere. A tree of small dimensions. This is the Heartwood of Tasmania. Wood very hard, and yields a very peculiar figure. (Extracts from *Jurors' Report*, Lond. Ex., 1862.)

158. *Ozothamnus ferrugineus*, R. Br.*Nat. Ord.—Compositæ (Helichrysum ferrugineum, Lessing.)*

Common in the southern and middle districts of the colony. More a shrub than a tree.

159. *Panax Murrayi*, F. M.PALM-PANAX. *Nat. Ord.—Umbelliferæ (P. palmaceus.)*

In Victorian territory only to be found on the south-eastern boundary of New South Wales. The slender palm-like stem attains seldom above 1 foot in diameter, though not rarely a height of 80 feet. The wood is singularly light and soft, is white and has a large pith. Specific gravity 0.348, or weight of a cubic foot nearly 22 lbs.

160. *Panax sambucifolius*, Sieb.*Nat. Ord.—Umbelliferæ.*

In forest valleys, particularly in the Fern-tree gullies. A small tree only.

161. *Persoonia arborea*, R. Br.*Nat. Ord.—Proteaceæ.*

In the Fern-tree gullies, only on the south-western base of our Alps. The tallest of all the species.

162. *Persoonia linearis*, R. Br.*Nat. Ord.—Proteaceæ.*

Not extending westward of Gippsland. A small, crooked tree, singular for the scarious lamellæ of its red bark. Wood close, prettily marked, will yield handsome veneers. (Macarthur)

163. *Persoonia rigida*, R. Br.*Nat. Ord.*—*Proteaceæ*.

Grampians, Mount Alexander, Buffalo Ranges and mountains on the Hume-River. A shrub of good size, but never a tree.

164. *Pimelea microcephala*, R. Br.*Nat. Ord.*—*Thymelææ*.

In the north-western desert

165. *Pittosporum bicolor*, Hook.WHITEWOOD. *Nat. Ord.*—*Pittosporææ*.

In the Fern-tree gullies, also in the back-regions. A small and occasionally a middle-sized tree. Wood valuable for handles of implements, and has been used for wood-engraving by Mr. F. Grosse. (*Official Record*.) Yellowish-white, very hard and of uniform texture and colour, used in turnery. Once used for clubs by the natives. (*Tasmanian Report*.) The tree yields a pale useful gum. Specific gravity of wood 0.874, or weight of a cubic foot nearly 48 lbs.

166. *Pittosporum phyllræoides*, D. C.*Nat. Ord.*—*Pittosporææ*.

Restricted to the desert tracts—on sandy or barren stony declivities and plains, chiefly on limestone subsoil. A small tree, bitter in all its parts, yielding a gum similar to gum arabic. Cattle are fond of the leaves.

167. *Pittosporum revolutum*, Ait.*Nat. Ord.*—*Pittosporææ*.

On lightly-timbered undulations and ridges along the south-eastern boundary line of Gippsland. A shrub from several feet high attaining in favourable sheltered forest ravines the size of a small tree.

168. *Pittosporum undulatum*, Vent.FRAGRANT PITTOSPORUM. *Nat. Ord.*—*Pittosporææ*.

In the humid forest glens from Western Port and Dandenong eastward throughout Gippsland. Attains in favourable localities a height of 80 feet, and a diameter of two feet. The wood is tough,

but easily worked. (*Jurors' Official Record of 1862.*) Wood excellent for turnery and apparently adapted for wood-engraving, and favourably reported upon by Mr. De la Motte as to its suitability for this purpose. (*Jurors' Report*, London Ex., 1862.) The bark yielded tannic acid 1·2 per cent, and gallic acid 0·7 per cent. 100 lbs. of flowers yielded 2 ounces of essential oil, of exquisite fragrance.

169. *Plagianthus pulchellus*, Gray.

One of the Currijongs. *Nat. Ord.*—*Malvaceæ*. (*Sida pulchella*, Bonp.)

Not rare along banks of rivers and rivulets in the southern and middle parts of the colony. A tall, somewhat graveolent shrub, attaining the height of above 30 feet, and then assuming an arborescent habit. Bark of the branches tough, worked up by the aborigines into cordage.

170. *Pomaderris apetala*, Lab.

Nat. Ord.—*Rhamnaceæ*.

In forest-glens and along wooded river-banks, not rare in the southern and eastern parts of the colony, but never seen away from moist, shady and sheltered forest-valleys. A soft, useful wood of pale colour, adapted for carvers and turners' work (*Jurors' Report*, 1862), and, according to Dr. Bennett, may be profitably employed in wood-engraving. Specific gravity of wood 0·772, or weight of a cubic foot 48 lbs.

171. *Pomaderris betulina*, Cunn.

Nat. Ord.—*Rhamnaceæ*.

Genoa River. A shrub or occasionally a small tree.

172. *Pomaderris elliptica*, Lab.

Nat. Ord.—*Rhamnaceæ*.

Following the course of rivers, particularly within the mountains, excelling *P. apetala* in height, of less extensive distribution; when away from the gullies reduced to shrubby growth (F. Mueller, in *Jurors' Report of 1866.*)

173. *Pomaderris subrepanda*, F. M.

In the southern parts of the colony, along the water-courses. A small tree only.

174. *Podocarpus alpina*, R. Br.

Nat. Ord.—*Coniferae*. (*Nageia alpina*, F.M.)

On the Snowy Mountains. Usually depressed on the exposed summits of the Alps, erect in the nearest valleys, never tall; our only Alpine Pine.

175. *Prostanthera lasianthos*, Lab.

MINT-TREE. Nat. Ord.—*Labiatae*.

One of the most widely-diffused trees of our ranges and river banks, varying where well developed from 30 to 60 feet in height; diameter of stem about 1 foot, exceptionally 2 feet. The wood hard and tough. Specific gravity 0·809. (*Jurors' Report*, 1862.) The saplings locally used for fishing rods. Weight of a cubic foot of dry wood 50½ lbs. (F. M.)

176. *Prostanthera nivea*, A. Cunn.

Nat. Ord.—*Labiatae*.

Mountains of Bacchus Marsh, Mount Korong, Mount Hope, Station Peak, &c A beautiful shrub, but never large.

177. *Pultenæa altissima*, F. M.

Nat. Ord.—*Leguminosae*.

East Gippsland. A tall shrub, but never truly arboreus.

178. *Sambucus xanthocarpa*, F. M.

THE NATIVE ELDER. Nat. Ord.—*Caprifoliaceae*.

East Gippsland.

179. *Santalum acuminatum*, D. C.

NATIVE PEACH OR QUANDONG. Nat. Ord.—*Santalaceae*.

In the Mallee-scrub. Always a small tree only. Specific gravity of wood 0·828. Quandong nuts are strung for bracelets and mounted for pins. The fruit is of an agreeable acidulous taste, and usually every alternate year richly produced. The kernel of the fruit, which is also edible, is oleaginous. (*Official Record* of 1862.) Wood probably fit for wood-engraving. (Moore.) Weight of a cubic foot of dry wood about 51½ lbs.

180. *Santalum persicarium*, *F. M.*NATIVE SANDALWOOD. *Nat. Ord.*—*Santalaceæ*.

In the Murray desert. A small tree. Specific gravity of wood 0·747.

181. *Senecio Bedfordii*, *F. M.*

NATIVE DOGWOOD.

*(Bedfordia salicina, D. C.)**Nat. Ord.*—*Compositæ*.

In Fern-tree gullies and in other shady and springy glens. A hard, light-coloured wood, which may be useful for enlaying and for turnery. (*Jurors' Report* of 1862.) A hard, pale brown, well mottled wood, good for furniture. (*Jurors' Report*, London Ex., 1862.) Specific gravity 0·896. The stem never attains to great dimensions for real timber.

182. *Sponia aspera*, *Decaisne*.*(Trema cannabina, Laur.)**Nat. Ord.*—*Urticææ*.

East Gippsland. A small tree.

183. *Telopea oreades*, *F. M.*VICTORIAN WARATAH. *Nat. Ord.*—*Proteaceæ*.

East Gippsland, on the highest mountains.

184. *Tristania laurina*, *R. Br.**Nat. Ord.*—*Myrtaceæ*.

Along the rivers of East Gippsland. But a small tree. A close-grained, tough wood, used for machinery-purposes and apparently well adapted for the same. (*Jurors' Report*, London Ex., 1862.) Wood, fine and close grained; easily worked, but acquiring an exceedingly hard and bony texture when carefully seasoned; very apt to split if not dried with great precaution. A most valuable wood of its dimensions, and believed to be unmatched for cogs of wheels in machinery. (*Macarthur*.)

185. *Viminaria denudata*, *Sm.**Nat. Ord.*—*Leguminosæ*.

On swampy ground in the southern and eastern portions of the colony. Wood soft and spongy. Specific gravity 0·623.

186. *Vitis hypoglauca*, *F. M.*

THE NATIVE GRAPE-VINE.

Nat. Ord.—*Viniferæ*.

East Gippsland. It attains to the size of a tree, with a comparatively stout stem.

187. *Xanthorrhoea Australis*, *R. Br.*

GRASS-TREE.

In some heathy tracts extremely abundant. Stem varying from a few feet to 10 feet in height, usually crooked, proportionately stout. The fragrant resin from this species, which is soluble in spirit, is of a deep amber-colour, and is employed for staining wood to imitate cedar, for preparing varnishes, and as a source of picric acid.





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